

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Paris E. Blair, et al

Title: INTERGRATED TRANSMITTER SURVEYING WHILE BORING (SWB)  
ENTRENCHING POWERING DEVICE FOR THE CONTINUATION  
OF A GUIDED BORE HOLE

Docket: 32237US2

PRELIMINARY AMENDMENT  
(Submitted with initial filing)

Assistant Commissioner for Patents  
Washington, D.C. 20231

Sir:

Please amend the application prior to its examination as follows.

IN THE TITLE:

Please amend the title to read as follows:

--INTERGRATED TRANSMITTER SURVEYING WHILE BORING  
ENTRENCHING POWERING DEVICE FOR THE CONTINUATION  
OF A GUIDED BORE HOLE--

IN THE SPECIFICATION:

On page 1, after line 7, insert a new paragraph as follows:

-- This application is a divisional of U.S. Patent Application No. 09/617,189 filed on July 14, 2000.--

IN THE CLAIMS:

Please cancel claims 1-8 without prejudice.

Please add the following claims 9-22.

- 1           9. (new) A tubular outer housing of a mud motor, said tubular outer housing having a
- 2   through bore substantially along a longitudinal axis thereof and an interior surface and an
- 3   exterior surface, said tubular outer housing comprising a receiving pocket in the exterior

4 surface sized to receive a sonde.

1 10. (new) The tubular outer housing of claim 9, further comprising a shock resistant  
2 holder for the sonde shaped to be received in the receiving pocket, and a cover plate,  
3 removably attached to the outer housing over the receiving pocket, functioning to hold the  
4 sonde and shock resistant holder in place.

1 11. (new) The tubular outer housing of claim 10, further comprising a sonde placed in  
2 the shock resistant holder.

1 12. (new) The tubular outer housing of claim 10, wherein the cover plate further  
2 includes at least one longitudinal slot to allow the passage of electromagnetic signals from  
3 the sonde.

1 13. (new) The tubular outer housing of claim 12, wherein the longitudinal slots  
2 further include a filling of non-metallic material.

1 14. (new) A tubular outer housing for a mud motor, said tubular outer housing having  
2 an exterior diameter, said tubular housing further including a mount within the external  
3 diameter.

1 15. (new) The tubular outer housing of claim 14, wherein the mount comprises an  
2 elastomeric sarcophagus shaped to hold a sonde, a cavity in the tubular outer housing shaped  
3 to hold the elastomeric sarcophagus, a lip formed around the cavity, and a removable cover  
4 plate set in the lip.

1 16. (new) The tubular outer housing of claim 15, further comprising a sonde set in the  
2 elastomeric sarcophagus.

1 17. (new) A tubular outer housing of a mud motor, said tubular outer housing having  
2 a through bore substantially along a longitudinal axis thereof, an interior surface and an  
3 exterior surface, said tubular outer housing comprising a collar having an interior surface and  
4 an exterior surface removably attached at the inner surface of the collar to the outer surface of  
5 the tubular outer housing, a receiving pocket in the exterior surface of the collar shaped to  
6 receive a sonde, a shock resistant holder for the sonde shaped to set in the receiving pocket,  
7 and a cover plate, removably attached to the outer housing over the receiving pocket,  
8 functioning to hold the sonde and shock resistant holder in place.

1 18. (new) A coupler disposed between a bearing mandrel and a bit box of a mud  
2 motor, said coupler comprising a through bore substantially along a longitudinal axis of the  
3 coupler, said coupler having an interior surface and an exterior surface, and a receiving  
4 pocket in the exterior surface shaped to receive a sonde.

1 19. (new) The coupler of claim 18, further comprising a shock resistant holder for the  
2 sonde shaped to set in the receiving pocket, and a cover plate, removably attached to the  
3 coupler over the receiving pocket, functioning to hold the sonde and shock resistant holder in  
4 place.

1 20. (new) In an entrenching powering device having an exterior wall of a housing, an  
2 improvement comprising a sonde mounted in pocket formed in the exterior wall.

1 21. (new) The entrenching powering device of claim 20, further comprising the sonde  
2 mounted in a shock resistant holder set in the pocket.

1 22. (new) The entrenching powering device of claim 21, further comprising a  
2 removable cover mounted over the pocket.

REMARKS

This is a divisional application. Accordingly, the claims being issued in the parent case have been cancelled and the claims which were added during prosecution and then restricted out are now being added for prosecution.

If any further fees are required by this communication which are not covered by an enclosed check, please charge such fees to our Deposit Account No. 16-0820, Order No. 32237US2.

Respectfully submitted,  
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Date: 12-21-01